

“Metropolitan Area Network Services Comprised of Virtual Local Area Networks Running Over Hybrid-Fiber/Coax and Asynchronous Transfer Mode Technologies,” in *Proceedings of the International Society of Optical Engineering*, Vol. 2609, Paper No. 2609-06 (hereinafter Biedron). Claim 21 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Crinion in view of Biedron and further in view of U.S. Patent No. 5,802,047 issued to Kinoshita. For at least the reasons set forth below, Applicant submits that claims 1-24 are not rendered obvious by Crinion, Biedron, and Kinoshita.

As is clearly set forth at Section 706.02(j) of the M.P.E.P., the following three basic criteria must be met in order for the Examiner to establish a prima facie case of obviousness:

1. There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;
2. There must be a reasonable expectation that combining the references would successfully result in the claimed invention; and
3. The prior art references when combined must teach or suggest all limitations of the claims under examination.

Section 706.02(j) of the M.P.E.P also states that the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claim 1 recites an aggregated VLAN architecture system comprising:

an edge switch connecting a MAN to a super-VLAN, the super-VLAN comprising at least one of a plurality of sub-VLANs, and wherein the edge switch applies a modified bridge forwarding rule to **exchange a VLAN ID associated with the sub-VLAN for a VLAN ID associated with the super-VLAN** before

forwarding a data packet from the sub-VLAN over the MAN using at least one of a router and a switch.

Independent claims 12, 18, 19, and 20 similarly recite exchanging a sub-VLAN ID for a super-VLAN ID.

Crinion discloses an apparatus and method for assigning VLAN tags based on data frame information and the port on which the data frame is received. (See col. 1, lines 45-47.) Crinion does not teach exchanging a sub-VLAN ID for a super-VLAN ID.

The Office Action states that Crinion (at col. 4, lines 14-18) discloses a tag that includes a VLAN ID, and that Crinion (at col. 3 line 33) discloses tag replacement. The passage cited in the Office Action for tag replacement recites the following:

If a frame lacks a tag, or if tag replacement is desired, search circuit 130 searches the lookup data in content addressable memory 110 for the frame information. Once it has located the frame information, each circuit 130 reads the associated tag data.

(See Crinion, col. 3, lines 32-37). This passage merely indicates that if a frame is missing a tag or the tag needs to be replaced, the circuit will look up the tag data from the memory and insert that tag data into the frame. Therefore, the missing or “replaced” tag only includes a VLAN ID corresponding to the VLAN with which the data packet has been associated. Crinion does not teach exchanging a current sub-VLAN ID for a different super-VLAN ID.

The Office Action also states that Crinion (at col. 13, lines 25-31) teaches an aggregated VLAN network. This cited passage recites:

It is allowed for a node to be a member of multiple overlapping VLANs. This might be achieved by having a node associated with multiple VLANs, one of which would be a superset of the others, such that a port might send a packet on one VLAN, but receive packets on any of a number of other VLANs, for example, one server with n VLANs.

(See Crinion, col. 13, lines 25-31). This passage merely states that a node may be associated with multiple VLANs and one of these multiple VLANs may be a superset of the other VLANs.

This passage does not teach exchanging a current sub-VLAN ID for a different super-VLAN ID. Crinion does not disclose, teach, or suggest exchanging a current sub-VLAN ID for a different super-VLAN ID.

The Office Action states that Biedron teaches a Metropolitan Area Network (MAN) including a router and a switch. Whether or not Biedron teaches such a system, Biedron does not disclose, teach, or suggest exchanging a sub-VLAN ID for a super-VLAN ID, and therefore does not cure the deficiencies pointed out above with respect to Crinion.

Kinoshita teaches an inter-LAN connecting device with a combination of routing and switching functions. The Office Action states that Kinoshita teaches assigning VLAN ID based a data packet's IP address. Whether or not Kinoshita teaches this feature, Kinoshita does not disclose, teach, or suggest exchanging a sub-VLAN ID for a super-VLAN ID, and therefore fails to cure the deficiencies pointed out above with respect to Crinion and Biedron.

Neither Crinion nor Biedron nor Kinoshita discloses, teaches, or suggests exchanging a sub-VLAN ID for a super-VLAN ID. This feature is expressly recited in independent claims 1, 12, 18, 19, and 20. Therefore, whether taken individually or in combination, claims 1, 12, 18, 19, and 20 are patentable over Crinion, Biedron, and Kinoshita.

Claims 2-11, 13-17, and 21-24 are dependent claims and distinguish for at least the same reasons as their independent base claims in addition to adding further limitations of their own. Therefore, Applicant submits that claims 2-11, 13-17, and 21-24 are patentable over the teachings of Crinion, Biedron, and Kinoshita for at least the reasons set forth above.

CONCLUSION

For at least the foregoing reasons, Applicant submits that the rejections have been overcome. Therefore, claims 1-24 are in condition for allowance and such action is earnestly solicited. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application.

Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN, LLP

Date: 10/16/02

Lisa Tom
Lisa Tom
Reg. No. 52,291

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, CA 90025-1026
(503) 684-6200

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage in an envelope addressed to the Commissioner of Patents, Washington, D.C. 20231 on:

16 OCTOBER 2002
Date of Deposit
DEBORAH L. HIGHAM
Name of Person Mailing Correspondence
[Signature] 10/16/02
Signature Date